Skelly and Loy, Inc.
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BRIDGE 918 ON S.R. 30 AT REYNOLDS POND
BROADKILN HUNDRED, SUSSEX COUNTY, DELAWARE
PROJECT SUMMARY TO SEPTEMBER 28, 2007

Introduction

This document provides summarized information regarding the archaeological investigations completed by Skelly and Loy, that are associated with the Federal Highway Administration (FHWA) and Delaware Department of Transportation's (DelDOT) proposed replacement of Bridge 918 on State Route (S.R.) 30 at Reynolds Pond located in Broadkiln Hundred, Sussex County, Delaware (Photograph 1). The proposed project entails the replacement of the existing (*ca.* 1925) Bridge 918 with a wider box culvert and a new spillway, and construction of a 0.30 ha (0.75 ac) wetland mitigation site to the east of the bridge site (Photographs 2 and 3). In order to ensure that the FHWA's/DelDOT's Section 106 compliance responsibilities are met, FHWA, DelDOT, and the Delaware State Historic Preservation Office (SHPO) have entered into a Memorandum of Agreement (MOA). The MOA outlines the specific tasks and processes that FHWA/DelDOT will follow in order to mitigate the adverse effects of the project to known or suspected archaeological sites. This project summary provides archaeological discussions about those tasks and processes included in the MOA in order to help document their successful completion.

Establishment of Area of Potential Effects

FHWA, DelDOT, and SHPO have established the proposed project's Area of Potential Effects (APE) to include those areas within the Limits of Construction (LOC), Temporary Construction Easements (TCE)/Permanent Easements (PE), and/or Right of Way (ROW), and adjacent or contiguous properties where visual effects may occur. Skelly and Loy was advised of the APE boundaries both verbally and on mapping provided by DelDOT. All of Skelly and Loy's cultural resources investigations were completed within the defined APE, and the entire APE has been considered during the cultural resources investigations.

Monitoring and Data Recovery at the Reynolds Mill Site

Since archival, cartographic, and oral history research demonstrated that mill remains were likely present beneath the existing bridge and spillway, DelDOT requested that Skelly and Loy personnel monitor the demolition and removal of the bridge and spillway, and the installation of the new box culvert. Monitoring began on August 7, 2007 and continued until September 13, 2007. Monitoring of the bridge/spillway demolition revealed archaeological remains including a few artifacts, a portion of the mill's brick foundation, and a large wood platform and frame made from reused mill timbers and planking that appears to have served as a foundation/base for the *ca.* 1925 bridge/spillway structure (Photographs 4-12). Recovered artifacts include over 200 fragments or objects made of ceramic, glass, metal, stone, or wood, the majority of

which are large timbers or planks comprising the wood platform and frame structure. Objects include bottles, nails, timbers, planks, and mill stones (Photographs 13-15).

Due to the construction techniques which had to be used during demolition of the ca. 1925 structures and emplacement of the new box culvert, the documentation of the archaeological resources located at the bridge site had to be done concurrently with the demolition/construction. As per the MOA, after consultation with the SHPO, the archaeological remains were presumed to be significant and eligible for listing in the National Register of Historic Places (NRHP) for the purposes of Section 106. This allowed the archaeological research, which started as demolition monitoring, to expand into full-scale data recovery, as per the treatment plan, with no delays to the construction schedule.

Daily field notes discussing the monitoring/data recovery process were kept. All archaeological remains were identified during backhoe excavations associated with the bridge/spillway demolition. Once a feature was identified by the monitoring archaeologist, the mechanical excavations were halted and the archaeological crew finished exposing the feature *in situ* by hand excavation. In this manner, hand-excavation efforts were minimized, which kept the construction schedule moving, but also protected the resources from damage by the mechanical equipment. All archaeological remains, as well as general site depositional conditions, were described, photographed, and mapped. A theodolite and transit were used to map features at the site into three dimensions. Hand-drawn, detailed plan view and profile maps were also completed. Digital photography recorded structural details, as well as general work in progress. All artifacts of a size that were easily transportable and of interpretive importance were collected, and wood and brick samples were taken for both future curation and analyses. Mechanical equipment was used to move many of the larger wood and mill stone pieces. Two mill stone fragments were collected by DelDOT personnel and are temporarily stored at a DelDOT facility.

In order to maintain the strict construction schedule and not incur undo delays, Skelly and Loy personnel coordinated and worked closely with the construction crew and Site Inspector during the bridge/spillway demolition in order to ensure that the archaeological materials remained intact and undamaged, and that they were documented, mapped, photographed, and removed from the construction area. Much of the credit for the successful completion of the monitoring is due to the willingness of the construction crew and Site Inspector to cooperate and understand the need for and importance of the archaeological research. Coordination with DelDOT cultural resources personnel, who in turn coordinated with DelDOT project managers and SHPO, was ongoing during the monitoring. Skelly and Loy provided oral information during fieldviews as well as electronic photographs and descriptions of the archaeological remains to DelDOT personnel for their use in project coordination and decision making. In turn, DelDOT cultural resource personnel communicated any project decisions to Skelly and Loy personnel to ensure that the archaeological investigations maximized the available information and were completed using acceptable techniques.

All of the monitoring/data recovery project materials (with the exception of two mill stone fragments) are temporarily stored at Skelly and Loy's Monroeville laboratory facility. Based on future discussions with DelDOT and SHPO, and language included in the MOA, Skelly and Loy will conduct the appropriate analyses and provide the agreed upon products for the Bridge 918 project under supplemental agreement. These products will most likely include information about the project presented at both a technical professional level and as a lay public level. As discussed in the MOA, a "creative public involvement program" will be developed and implemented. At the

successful completion of the project, all project materials will be transported to the Delaware State Museums for permanent curation.

Wetland Mitigation Project

A Phase I archaeological survey was conducted in April and May 2005 for a proposed wetland mitigation area associated with the Bridge 918 replacement project. The wetland mitigation area totaled 1.07 ha (2.65 ac) and was examined through plowing, controlled surface collection, and the excavation of 21 1.0 x 1.0 m (3.3 x 3.3 ft) test units.

A single pre-contact period archaeological site was discovered. Site 7S-C-97 contained pre-contact period ceramics (n=76), flaked lithic artifacts (n=147), and other lithic artifacts (n=2). Background research on the mill and the results of the archaeological survey were documented in a Phase I survey report, which was submitted to DelDOT in June 2005 (Espenshade *et al.* 2005). Phase II archaeological testing was recommended for Site 7S-C-97, if it could not be avoided; however, through project redesign, DelDOT is avoiding the site. Based on language included in the MOA, fencing will be emplaced surrounding the site to prevent inadvertent encroachment during construction. Since the site will be avoided, no additional archaeological investigations are planned. Curation of the Wetland Mitigation Phase I survey project materials was completed in August 7, 2007, with delivery of the materials to the Delaware State Museums.

Unmarked Human Remains

To date, no human remains have been identified during the Bridge 918 archaeological investigations.

References Cited

Espenshade, C.T., G.M. Kuncio, K.W. Mohney, M.G. Sams, and A.T. Vish

2005 *Sussex County, Delaware, Broadkiln Hundred, Bridge 918 on SRr. 30 at Reynolds Pond Improvement Project, Phase I Archaeology, Wetland Mitigation Area.* Skelly and Loy, Inc., Monroeville, Pennsylvania. Submitted to the Delaware Department of Transportation, Dover.

Photographs

Photograph 1. Bridge 918 project area prior to demolition of ca. 1925 bridge, facing north.

Photograph 2. West side of ca. 1925 bridge showing gate, facing southeast.

Photograph 3. East side of ca. 1925 bridge showing spillway opening, facing west.

Photograph 4. North, west, and south brick mill foundation walls, facing south/southeast.

Photograph 5. Mapping north brick mill foundation wall, facing south/southwest.

Photograph 6. East half of wood structure after exposure, facing southeast. Note north brick mill foundation wall at top of photograph.

Photograph 7. East half of wood structure with large cross timbers removed to reveal plank surface, facing south/southeast.

Photograph 8. East half of wood structure frame with planking removed, facing southeast.

Photograph 9. Mapping east half of wood structure, facing south/southwest.

Photograph 10. West half of wood structure initial exposure during removal of ca. 1925 bridge and spillway, facing southeast.

Photograph 11. West half of wood structure after exposure, facing north.

Photograph 12. Mapping west half of wood structure, facing northwest.

Photograph 13. Mill Stone No. 1 fragment.

Photograph 14. Mill Stone No. 2 fragment.

Photograph 15. Example of nails.